

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
18 December 2003 (18.12.2003)

PCT

(10) International Publication Number  
WO 03/103551 A1

(51) International Patent Classification<sup>7</sup>: A61F 13/15

(21) International Application Number: PCT/EP03/05848

(22) International Filing Date: 4 June 2003 (04.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
P02 01 02203 11 June 2002 (11.06.2002) AR

(71) Applicant (for all designated States except US): CARL  
FREUDENBERG KG [DE/DE]; Hühnerweg 2-4, 69469  
Weinheim (DE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): SUAREZ, Claudio,  
Miguel [AR/AR]; Julian Balbin 2561, Parque Leloir,  
Ituzaingo, Provincia de Buenos Aires (AR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR, CU, CZ,

DK, DM, DZ, EC, EE, GD, GE, GH, GM, HR, HU, ID,  
IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,  
LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,  
OM, PH, PL, RO, RU, SC, SD, SG, SK, SL, TJ, TM, TN,  
TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report  
— before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.



WO 03/103551 A1

(54) Title: TRANSFER LAYER OF LIQUID FLUIDS AND AN ABSORBENT ARTICLE INCORPORATING THE SAME

(57) **Abstract:** A transfer layer of liquid fluids and an absorbent article incorporating the same, like a diaper, a sanitary napkin or a similar product, which has a permeable cover below which there is disposed a nonwoven transfer layer of liquid fluids followed beneath by an absorbent core which retains the fluids. In the transfer layer there is provided a top layer of predominating hydrophobic properties and an bottom layer of predominating hydrophilic properties. The transfer layer has an embossed surface configuration, with channels formed by compressed nonwoven streaks forming transversal peaks and valleys extending in longitudinal direction along the transfer layer. The lower thickness of the transfer layer resulting from the compressed stretches which form valleys, provide the channels with a predominating hydrophilicity, which facilitates the quick liquid transfer towards the absorbent core, while the higher thickness of the transfer layer in the peaks provide it with a predominating hydrophobia, which impedes the liquid to return from the absorbent core to the permeable cover, thus reducing the index of remnant humidity in the zone of contact with the user's skin, even if the absorbent core is submitted to pressure.